

REMARKS/ARGUMENTS

The present invention relates to an improved thin film magnetic head and magnetic recording apparatus, in which the coil resistance value is lowered, the quantity of generated heat is reduced, and the high-frequency characteristic is improved by shortening a yoke length.

The objection to the specification and the rejection of claims 1-22 under 35 U.S.C. § 112, first paragraph are obviated by amendment.

Regarding the phrases “first pole portion” and “reduced track width”, Applicants submit that the claims 1 and 12 have been amended to recite that --said first pole portion comprises a pole piece having an upper end part narrowed in track width at each side of said pole piece--. As explained on page 22, line 19 to page 23, line 3 of the present specification, the pole piece 214 (of the first pole portion) has the upper end part narrowed in track width at both sides so that the upper end part has a narrow track width PW, i.e., contributing to the reduced track width of the first pole portion. This narrowed track width is evidenced by Figure 4 of the present specification, which shows the reduced width of the upper portion of the pole piece 214 of the first pole portion P1, which is presented below for the Examiner's convenience.

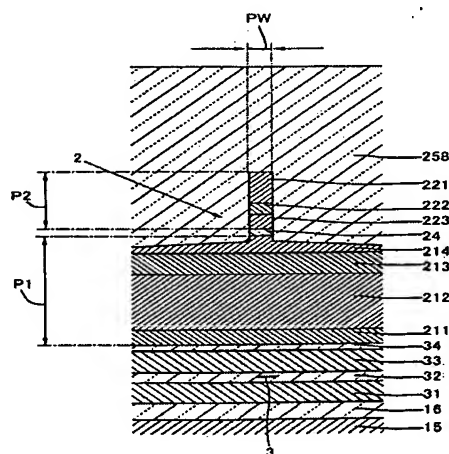


FIG.4

Regarding the first pole position **P1** projecting from the first magnetic film,

The rejection of claims 1-22 under 35 U.S.C. § 112, second paragraph is obviated by

In claims 1 and 12, the phrase “the space between coil turns” has been changed to --a

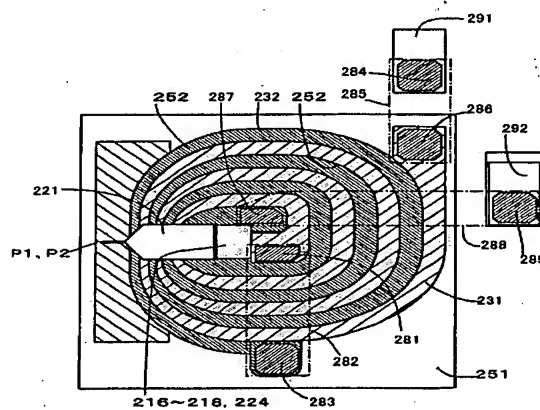


FIG.6

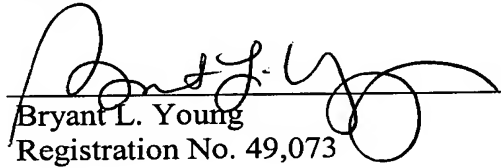
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In view of the amendments and support for the amendments in the present specification and figures, Applicants request the withdrawal of the pending objections and rejections.

Applicants submit that this application is now in condition for allowance and early notification of such is earnestly solicited.

Respectfully submitted,

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ABSTRACT OF THE DISCLOSURE

The invention is directed to improvement of a thin film magnetic head of a magnetic recording apparatus. The magnetic head includes a write element, in which a first coil and a second coil are provided on a first insulating film formed on one surface of a first magnetic film and surround in a spiral form a back gap portion. One of the first coil and the second coil is fitted into the space between coil turns of the other, insulated from the coil turns of the other by a second insulating film, and the first and second coils are connected to each other so as to generate magnetic flux in the same direction. One of the first coil and the second coil has a side surface being adjacent to the pole portion with the second insulating film and another side surface being adjacent to the back gap portion with the second insulating film, and each of the side surfaces has a taper angle making the sectional shape of the coil narrower in the lower part and wider in the upper part. The upper surfaces of the first and second coils form the same plane.